

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number
WO 2005/077044 A3

(51) International Patent Classification:

C07K 5/00 (2006.01) **C07K 17/00** (2006.01)
C07K 7/00 (2006.01) **A61K 38/00** (2006.01)
C07K 16/00 (2006.01) **A61K 38/04** (2006.01)

(21) International Application Number:

PCT/US2005/004043

(22) International Filing Date: 7 February 2005 (07.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/542,117 5 February 2004 (05.02.2004) US

(71) Applicant (for all designated States except US): **ARIZONA BOARD OF REGENTS, acting for on behalf of ARIZONA STATE UNIVERSITY** [—/US]; The Brickyard, 699 South Mill Avenue, Room 691AA, Tempe, AZ 85281 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **JOSHI, Lokesh** [IN/US]; 5631 South Spyglass Road, Tempe, AZ 85283 (US). **GHIRLANDA, Giovanna** [IT/US]; 8043 East McLellan Boulevard, Scottsdale, AZ 85250 (US).

(74) Agent: **HARPER, David, S.**; McDonnell Boehnen Hulbert & Berghoff LLP, 300 South Wacker Drive, Suite 3100, Chicago, IL 60606 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(81) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

18 May 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: RATIONAL DESIGN AND ENGINEERING OF PROTEINS AND PEPTIDES FOR IMMUNOMODULATION

(57) Abstract: The present invention discloses an immunomodulatory protein or peptide mimetic and method for treatment of immunosuppressive diseases and conditions by administering an effective dose of the immunoactive form of the mimetic sufficient to activate phagocytic cells and triggering phagocytosis, thereby activating the immune system.



WO 2005/077044 A3